Investigating the Death of an Ecosystem

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The experiment was based on the effects of airport and residential runoff on a freshwater ecosystem. The basis of the testing was to connect potential sources of pollution to a cyanobacteria bloom that took place over the Summer of 2015. Water was tested from eight different test sites around the pond over a period of roughly two months for phosphates, nitrates, dissolved oxygen and the airport de-icing chemical, propylene glycol, in order to establish the nature and source of pollutants. After testing, the results showed that there was a connection between high phosphate levels and the bloom. Also, dissolved oxygen levels and propylene glycol levels both elevated after the bacteria died in a frost in October. To see if there was a connection between dissolved oxygen and propylene glycol, a second experiment was conducted. The results of experiment 2 showed that in the presence of glycol, dissolved oxygen levels lowered. In the presence of bacteria and propylene glycol, however, oxygen levels dropped even more acutely.

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